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SECTION OF STATE MEDICINE

Academy of Medicine Thursday, January 25th, 1917, 8.30 o'clock p.m.

Dr. Gordon Bates in the chair.

The secretary read the minutes of the last meeting, which were passed as read.

The secretary then read a letter from Dr. J. H. Elliott.

The Secretary: I might say that I answered this communication, and pointed out to Dr. Elliott that I took responsibility for that action, and, therefore, I didn't think it fair to write of the Section. I stated that the circumstances were peculiar, that we were really in a hurry to have something done before the 1916 City Council was dissolved, as I took it that the Council of the Academy of Medicine would be heartily in favor of an increased accommodation for the Feeble Minded and took that liberty. I also pointed out that I thought the resolution carried more weight because it was passed by the President of the Academy of Medicine. However, I said that if I was wrong in this particular resolution I would do what I could to set it right. In other words,

if the Council were not in favor of that resolution I would do my best to withdraw it.

The Chairman: Any comments in regard to this matter? I may say that the wording of this resolution states that the resolution was passed in the Section of State Medicine, not of the Section of State Medicine, and there has been, in a way, a misinterpretation of the terms of the motion. I cannot see how there can possibly be any criticism of the motion.

Dr. McPhedran: Cannot you appeal to the general body? If you should appeal to the Academy as a whole, the Academy could carry a resolution of that kind.

The Chairman: You mean, Dr. McPhedran, that the motion itself should be put to a general meeting. The matter will, I imagine, be taken up in Council tomorrow and if there is any criticism—

Dr. Hamilton: I might say, Mr. Chairman, that all action of the Council is referred to the Academy for revision, and no matter what the Council did it would be brought up before the Academy.

SYPHILIS FROM THE MEDICAL ASPECT

Dr. A. McPhedran:

Mr. Chairman and Gentlemen:

I am not just certain just what is meant about the discussion of syphilis from the medical aspect, but I take it for granted that the duty of the physician with regard to it would be the meaning of the phrase, and that we have to appreciate what we have to deal with first.

Syphilis has been long known as a con-

tagious disease, through I don't know how many centuries, and we know now that it is a contagious disease, a contagious fever, just as much as scarlet fever, smallpox or any of those so-called contagious fevers. Syphilis has always, I suppose, been accompanied by some disturbance of temperature. It is an effect, of course, produced by a living organism, that grows

and multiplies in the host into which it enters. That is, if the host is not immune. The organism gains admission through the surface of the body. It can gain admission through an uninjured surface, such as the mucous of the mouth. The contagion is transmitted by contact either of the original host, or by some intermediate substance from the surface of which the germ is carried, mixed with something that enables it to retain vitality and in that way gains access to the new host through the body surface somewhere. There are not rare instances at all of conveyance of the germ by spoons, for example, or forks, where the cook had the disease, tasted something and then got her mistress to taste from the same spoon, and the mistress became infected.

The duty of the profession towards the contagion in connection with this disease is first the same duty which the profession has towards other contagious diseases for which the isolation hospitals are used as preventatives. I need not deal with that as the chief exponent on that view is here to speak for himself. The next duty then is that, having been transmitted, the physician's duty par excellence comes into play, so that the disease shall be prevented from spreading from the patient to those in close contact with him. The patient shall be cured, if possible, and not only cured, but also, if it is a disease that continues in the body for an indefinite period, the effect shall be mitigated as far as possible. That applies especially to syphilis and to tuberculosis. They are infections that last an indefinite period, maybe years, in the body. If the patient cannot be cured, then the call is to lessen as much as possible the injurious effects of the disease and prevent its transmission to others and to the offspring which he or she may beget or bear.

There is one other duty that pertains to the physician, as well as to the health officer, and that is the education of the public as to the dangers that lurk in the existence of the disease in the neighborhood.

I think there is possibly one other aspect of protection that ought to be re-

ferred to, and that is the spread of the contagion to the offspring, that they may not be the subject of the infection of the germ. That, of course, is not always possible, but I think it is possible in a great majority of cases, if proper care is taken in the treatment of the male in getting the female in bearing.

In discussing the treatment of syphilis and the duty of the profession to it, it should be clearly recognized that we are dealing with a disease that is a specific fever as much as any of the fevers to which I have alluded. It bears a very close resemblance to tuberculosis. They are both of long duration, the germ living for years in the host, perhaps dormant, breaking out from time to time, showing evidence of its existence, perhaps not clear evidence of what it is. They both produce symptoms of very great variety, the characteristic protean very variable. Almost any kind of symptom may arise and also almost any kind of pathological lesion anywhere in the body, so that they bear a very close resemblance to each other in that way, not only because of the long duration but also the great variety of phenomena resulting from them.

In their response to treatment they differ a good deal although even there there is a good deal of resemblance. The difficulty of controlling either after being once established is very great and very difficult to cure. The chief element in the cure of tuberculosis is time and care. In the syphilitic ordinary care is not sufficient. The germ must be destroyed in some active way by the physician, otherwise, as a rule, it continues until the end of life, and will lead to very grave consequences.

There is a fact to be borne in mind, however, in this relationship. It applies to both tuberculosis and syphilis. Many cases, no doubt, undergo a spontaneous cure, and in many cases also that have never shown any clinical evidence of the disease. Many cases have been examined by the most careful physicians, and yet afterwards an autopsy revealed the presence of the disease. Not only have the symptoms disappeared spontaneously, but in many cases no symptoms have ever been observed at all. I don't know that

it is quite within the limit of correctness to say that the majority have never had any recognized symptoms. This has been, I think, proven by late investigations, late work in hospitals, especially on this continent. It has been found, on examining the blood of people entering hospitals, that the evidence of having had syphilis is very widespread indeed, and the history of the patient shows no diagnostic sign of the disease ever having been discovered. The health is not good, but there are so many causes for ill health that that is no guide, but the tests for syphilis have been given a reaction in a great number of people who have given no history of having acquired syphilis.

There is a question with regard to treatment that is of very great importance. The patient is satisfied with the evidence of trouble, and then they afterwards disappear. He is convinced that he is cured, and unfortunately he finds that is the view taken by his physician, because the evidences have disappeared altogether. Of course, he will resort probably to the test and finds it inactive. He is satisfied to let the man go away. By and by that man may carry the ravages of that disease to other people. It seems to me that in no case of syphilis should the responsibility of the physician cease, providing he has his advice carried out, for a long time after the apparent cure. I think it ought to take, perhaps, from three to five years, that he ought to be in close touch with his patient, see him from time to time. The patient ought to consult him and the investigation should be carried out to determine that there is no active evidence of any kind, either through the examination of the patient or through the investigation of the condition of the blood.

These examinations need not be frequent, and they may be less and less frequent as time goes on, but it seems to me they ought to continue for a long time. The treatment should not be undertaken by anyone who does not realize the gravity of the danger ahead, and who would not undertake the responsibility lightly. The old plan was to treat syphilitic patients and give them different courses of medic-

ine, to continue treatment for five years. They had 100 of powder in the grain, I think one of each to be taken three times a day. I have no doubt at all it did good in a great many cases, but I am afraid that in many cases it was a mistake, and allowed the disease to grow and damage the man until perhaps he died later of the ulterior consequences of syphilitic infection.

Now, these quiescent cases that have had no history of syphilis exposure would give you no history whatever, and they come perhaps at the age of 50, 60 or older, even with damage to their tissues that is proven, no doubt, to be due to a former syphilitic infection, and they can give you no account of it at all. A great many are perfectly frank and honest. They are telling you all they know, but they don't know all that has occurred.

The disease, the organism, gets into the tissues through the , or through the mucous membrane. It is not rapidly passed on into the blood, but slowly. It takes some time. That is quite evident. If the physician was on the alert then to treat effectively, he could get a cure probably in a short time. It was an old maxim that no patient with the evidence of syphilis should be treated until the began to wane, or until six or eight weeks afterwards, until the so-called secondary infection showed itself. I think in view of our very recent knowledge of syphilis that that is a very reprehensible view. It is one that should never have obtained a footing, but having obtained it it should have been removed from the minds of the profession completely by this time. Knowing the character of the infection, its slow progress, its masked history or the evidence it presents, there should be no reliance placed on any such manner of treatment at all. As soon as a patient has a suspicion he ought to be actually treated. It is better to take the risk of the treatment than take the risk of the infection.

The disease gets into the blood, and the next point at which it lodges is probably always in the perivascular tissue. There is probably no part of the body at all in which the infection does not lodge, but it does not develop in all parts. Neither does

any other kind of infection. It has vitality, it has nutrition, it grows. The infection leads to destruction of the vessel wall in the media particularly, and then extends to the other parts, so that no part of the body is immune, and every part receives blood that contains the organism.

The vessels that are most liable to become infected and damaged by the organism are those that are most subject to strain. The aorta is peculiarly liable to infection. The cranial arteries are very liable also, and the internal arteries of the brain. The internal arteries of the brain, in comparison with the external support they receive, are most probably under strain of any arteries of the body. The small tissue gives very little support.

I take it the next point I have to make may cause some to object, but I feel quite strongly that it is right. It is that every syphilitic, no matter what the character of the lesions are—skin rash, cardiosclerosis, eye disease, ear disease, or whatever it may be, ought to be under the control of the physician. The lesion that is observable is a local one. It is produced by syphilis. It is only one of the local manifestations and should have, when necessary, the care of a specialist to deal with the local character of the disease. For instance, if the disease is in the eye, I don't mean to say the physician should treat that eye, but I do mean to say the physician should treat the patient and that the oculist should treat the eye. If it is a serious lesion of the skin, demanding special care, then the dermatologist should be sought. If it is a serious disease of the bone, the surgeon should be called in, and so with other special departments, but throughout the whole course of the disease the physician should be the responsible man for the patient, just as much as he is in scarlet fever. If the patient has a sore throat, there is no reason for consulting a throat specialist unless there is some special condition of the throat that demands expert attention. I am talking about the ideal condition. To my mind it is appalling that men who do not pretend to deal with internal medicine do not hesitate for a moment to take on the responsibility of treating a case of syphilis with-

out putting the patient under a physician. They get rid of the signs, and then some years afterwards the patient dies. The responsibility for a patient's care is a responsibility that hangs over the physician in charge of him for a long time, provided the patient will carry out instructions, and obey the advice given.

No one drug is sufficiently efficacious to be depended on. A very great deal of damage was done a few years ago when Ehrlich first introduced salvarsan and announced the doctrine that one dose was sterilizing. So many depended on that notion that the disease grew a very great deal worse and became much more extensive and widespread than before. It is probable that one dose may sterilize a case if it is given during the early period. It will destroy the germ if it gets in contact freely. The only way the medicine can cure is by destroying the organism, by damage to the protoplasm. I defer to some of the men present, who are more in touch with the bacteriological and chemical side than I am. We will hear what they have to say, but I have no doubt that the announcement of Ehrlich did a great deal of damage. It did a great deal of good by promoting the sale of the drug. I would not desire to attribute such a motive to Ehrlich. He was a fine fellow, especially for a Hun.

The longer the time from infection the more difficult to cure. That seems to be quite reasonable. It is an organism which becomes surrounded by a marked smaller exudate, and that becomes vascular in a short time, so that very little blood gets into the vessel and the organism within will die there. The later the period it follows that the longer the treatment will require to be carried on and the more difficult it is to obtain success.

The Chairman asked me to make some remarks upon the ultimate, or as he put it, I think, the end reactions. I suppose he meant the end phenomena of syphilis. Of course, they are as innumerable as the parts of the body, because all parts are liable to infection. The skin, any organ within the head, the circulatory system, the muscular system, the gland system often do show evidence, not in the same

individual but in various individuals. So that the end phenomena will give disease of any part, as I said, disease of the vascular system, disease of the nervous system, of the brain, spinal cord, kidneys, liver, lungs. I was looking at a microscopic plate of syphilitic disease of the lungs yesterday, and it looked really like a snow storm in the lung tissue, the enormous number of deposits resulting from infection of syphilis.

Dementia is a common result, at least, is commonly due to syphilis. aresis, general paralysis of the insane, perhaps the great majority of them, perhaps all of them, are due to syphilitic infection. Then arteriosclerosis is very often syphilitic. It is not in a good many cases. When it occurs in a man of 60, 65 or more it is usually not syphilitic. I have seen three or four of such cases in the last twelve months, and none of them, I think,

were syphilitic. However, arterioclerosis in a man under 50 and certainly under 40, I fancy, is always syphilitic, unless there has been a traumatism.

As I said the parts that are most subject to strain are the parts in which syphilis is most likely to develop, because the vessels of the part are subject also to strain, and the strain produces a lessened resistance of the tissue or perhaps a greater supply of blood.

The Chairman: One is more and more impressed by the remark which Osler made, that the man who knows syphilis knows medicine. I believe that is proved more and more.

There are a great many interesting points in Dr. McPhedran's paper, but I think we will postpone the whole discussion until the end and call on Dr. Hastings for his paper.

PUBLIC HEALTH ASPECTS OF VENEREAL DISEASES

Address Academy of Medicine by Chas. J. Hastings, M.D., L.R.C.P.I., Medical Officer of Health, Toronto.

PUBLIC health administration has dragged its slow length along down through the centuries—due for the most part to the superstition and doctrinal delusions of the early ages, and later to the absence of any knowledge of bacteriology or the ways and means by which disease is transmitted. Though District Health Officers were appointed in Rome 495 B.C., yet it was not until A.D. 1847 that the first Officer of Health was appointed in Great Britain, and it was between three and four decades after this that the establishing of the germ origin of disease by Pasteur and his Colleagues placed preventive medicine on a scientific basis. It was obviously impossible to advance until the science of biology began to place the beacon lights on the various rocks and shoals that had previously been responsible for many physical wrecks, and, unfortunately, there are still some submerged rocks.

Though venereal diseases were prevalent among the ancients, as referred to in the writings of Hypocrites, Aristotle and Plato, probably the first description given of Gonorrhea is found in Leviticus XV.: 2 and 3, written about 1490 B.C., though it no doubt goes back as far as the history of prostitution, over 4,000 years before Christ, and yet the gonococcus was only discovered by Neiser in 1879, and the organism of syphilis in 1905, and the Wassermann Test in 1907. However, in the light of modern knowledge, there is no longer any excuse for further delay in the broader science of preventive medicine, nor for further delay in our efforts to control this lamentably neglected branch of that science with which we are dealing to-night. Nevertheless, history has taught us that nothing but a calamity or impending calamity will rouse mankind individually or collectively to a sense of their duty toward their fellow men, and, inasmuch as

public sentiment is essential to the efficient administration of any reform, it is obviously necessary to enlighten the public to the disastrous results of these diseases to the home and to the community.

It is the opinion of those who are in a position to judge that venereal disease constitutes the most important of all factors in the degeneration and depopulation of the world. The intelligent and the ignorant; the innocent and the guilty are paying the penalty of an ignorant ill-considered, false modesty in terms of morbidity and morality that probably surpasses the amount of all other communicable conditions combined. The enormous medical, social and economic significance of venereal diseases, which are largely the result of prostitution, has never been properly appreciated by any nation. Every prostitute sooner or later becomes infected with one or both venereal diseases, and most of them within the first year.

It is estimated that New York has from two hundred to three hundred thousand syphilitics, which is only 5 per cent., a very conservative estimate.

The terms Pus Tubes, Ovaritis, Salpingitis, Cerebral hemorrhage, Locomotor-Ataxia, Paresis or General Paralysis of the insane, the blind, the half-blind, the divorcees, the suicides, the disrupted homes and other allied conditions, as Lydsten says, "Sound well, and have concealed the skeleton in many a closet, but in the light of modern knowledge we know that at least 90 per cent. of the aforesaid conditions are the result of Gonorrhea and Syphilis.

Dr. Howard Kelly of Johns Hopkins has pointed out that a large proportion of childless marriages are due to husbands being incapacitated from previous attacks of Gonorrhea. Probably from 17 to 25 per cent. are due to this. To these may be added the enormous number of one-child families, in consequence of the wife becoming infected during her first pregnancy.

In 1901 the Committee of Seven appointed by the New York State Medical Society reported that one out of every five in New York City was infected with Gonorrhea or Syphilis, and in a number

of clinics observed by Birnhoff, 75 per cent. were found to be suffering from venereal disease.

Dr. Flora Pollock in Dr. Kelly's Clinic in Johns Hopkins, reports 200 cases of little girls suffering from Gonorrhea and Syphilis. There were 500 of these little ones so infected in Baltimore every year.

The Chicago Vice Commission reported that 600 infected children under 12 years passed through the wards of one Chicago Hospital in 27 months.

The number of syphilitics in the United States is conservatively placed at two millions. This disease is not only in itself a danger, but it also causes a large number of diseases of the circulatory and nervous system, which result in chronic invalidism and death, and are consequently a great burden on the state. Extermination of sexual diseases would probably mean the elimination of at least one half of our institutions for defectives. The loss of citizens to the state from the sterilizing influence of Gonorrhea upon the productive energy of the family, and the blighting, destructive effects of Syphilis upon the offspring, are enormous.

Neiser, a distinguished German authority, states that in Germany fully 75 per cent. of the adult male population contracted Gonorrhea, and 15 per cent. have Syphilis. On the bases of all available sources of information, Blaschko calculates that of the clerks and merchants in Berlin, 45 per cent. have had Syphilis and 120 per cent. Gonorrhea; and in Breslau 77 per cent. have had Syphilis and 200 per cent. Gonorrhea, or an average of two attacks.

What Syphilis and Gonorrhea represent in the lower working efficiency of our population, to say nothing of the increased mortality, it is impossible to estimate, but it would be difficult to over-emphasize the great danger to national deficiency from these diseases, and yet the feature which casts the most reflection upon our intelligence is that these diseases are, for the most part, preventible and yet not prevented.

At the seventh meeting of the "Royal Commission on Nervous Diseases," evidence was given by Dr. Mott, Pathologist to the London County Council Asylums,

and a member of the Commission which dealt first with dementia paralytica, or general paralysis of the insane, in which he indicated the grounds on which it is held that Syphilis is the essential cause of this disease, and that without Syphilis there would be no general paralysis. Facts relating to general paralysis had, therefore, an important bearing on the Commission's inquiry. Dr. Mott gave various statistics respecting cases of this disease dealt with in the County Council Asylums. From a comparison of the figures for the last fifteen years, during which the population of London has remained practically stationary, he came to the conclusion that the admissions of cases of general paralysis were not diminishing, though he could not say that there was an increase. The figures showed that 8 per cent. of the total admissions from all causes, and 15½ per cent. of the male admissions, were general paralytics. The male cases of general paralysis of the insane considerably outnumbered the female, the ratio between them being rather more than 5 to 1.

On the subject of infant mortality, Dr. Mott stated that if the causes could be satisfactorily ascertained, the statistics of infant mortality would give important indications of the prevalence of Syphilis in the country. Among the serious effects were blindness, deafness, stunted growth, paralysis, dementia-paralytica, imbecility, fits and general debility. Two per cent. of all cases of General Paralysis of the insane were juvenile cases, due to congenital Syphilis. The percentage would be very much higher but for the fact that the majority of children whose brains become affected die in early life, or were born dead. Dr. Mott laid great stress on the desirability of a Wassermann Test for every new born infant when the parent had Syphilis, or was suspected of Syphilis, as it would then be possible to deal with latent diseases in the child. The essential point in the treatment of Syphilis was to detect the organism at the earliest possible time, and to begin treatment immediately. He advocated very strongly the provision of public laboratories, where Wassermann Tests and bacteriological ex-

aminations could be carried out. It was also of the utmost importance that satisfactory education should be provided for medical students, so that they should thoroughly understand Syphilis, and how to diagnose it in its early stages, so that all delay in dealing with the disease might be avoided.

It must be apparent then that in point of prevalence these diseases vastly overshadow all other infectious diseases, both acute and chronic combined. It is a conservative estimate to say that fully one-eighth of all human diseases and suffering comes from this source. Moreover, the incidence of these diseases falls most heavily upon the young, during the most active and productive period of life.

A still more lamentable feature of the consequences of these infections is that they are so often conveyed to the innocent members of society. There is abundant statistical evidence to show that 80 per cent. of the deaths from Inflammatory Diseases of the pelvic organs peculiar to women; 75 per cent. of all surgical operations of the abdomen, performed on women, and over 60 per cent. of all the work done by specialists in diseases of women are the result of Gonorrheal infection. And in addition to this, 50 per cent. or more of these infected women are rendered absolutely and irremediably sterile, and many are condemned to life long invalidism. Every year on this Continent thousands of pure women are infected in the relations of marriage, and in many instances their conceptional capacity destroyed, and aspirations which centre in motherhood and children are swept away, the holy office of maternity is desecrated by bringing forth tainted, diseased and dead children; and the women themselves, often ruined in health, are condemned to mutilation of their maternal organs to save their lives.

It is further estimated that 80 (9) per cent. of the Ophthalmia Neonatorum, which blots out the eyes of babes, and 20 to 25 per cent. of all blindness is caused by Gonorrheal infection, while Syphilis is transmitted to the offspring in full virulence. But, fortunately, 60 to 80 per cent. of all children infected with this disease

die before being born; but, unfortunately, many come into the world with the marks of death upon them. Those that finally survive it are the subjects of degenerative changes and organic defects which may be transmitted to the third generation.

From an economic standpoint, the fact that these diseases constitute the most potent factor in the causation of blindness, deaf-muteism, idiocy, insanity, paralysis, locomotor-ataxia and other incapacitating and incurable affections, impose an enormous charge upon the state and community. Millions of dollars are contributed to the support of defectives, but not a dollar for the dissemination of the saving knowledge which might prevent them.

This is but a fractional portion of the evidence that might be produced from both Europe and the United States. What the ravages of these diseases mean in Canada can be gathered from the appalling figures which Dr. Clarke will furnish later.

What is the solution? What can be done? What is the next move? With such indisputable evidence of the disastrous results of these diseases, surely custodians of the public health and lives can no longer remain silent.

That Governments, Nations and individuals are becoming aroused from their slumbers is apparent from the following. Sir Malcolm Morris in referring to the subject said:

"There must no longer be silence. The nation has been asleep while the enemy has been sowing its terrors. It was a monstrous anomaly that the State should enforce the notification of many infectious diseases and take charge of the insane and inspect workshops and factories and in a thousand other ways stretch out a long arm to safeguard the health of the community, and yet not lift a finger to protect the nation from such a devastating pestilence, which, more ruthless than the Destroying Angel who slew the First-born, smote daily the babe unborn."

The re-enforcing of these forceful statements by Lord Morely who said: "There is sheer moral cowardice in shirking from a large, serious inquiry into the extent,

the cause and the palliation of this hideous scourge," together with the appointments of the Royal Commission by the British House of Commons to investigate the extent of Venereal Diseases in Great Britain, in which Mr. Asquith announced that it was the intention of the Government "to institute an inquiry into the pestilence which walketh in darkness. The shame of silence is ended. Clean thinking and common sense have won their victory over prudery," go to demonstrate that there has been an awakening, but not more than the extreme significance of the problem demands.

In concerted action, Denmark led the way in 1906 with the following regulations:

Laws Against the Spread of Public Immorality and Venereal Infection.

Enacted by His Majesty, King Frederick, March 30, 1906.

(Sections I, II, III, relate to the regulation of prostitution). Section IV. relates to punishment).

"Section V. All individuals, suffering from venereal diseases, whether they be financially able to pay the costs of their treatment or not, shall be entitled to treatment at the expense of the community, so long as they are not able to present proof that they are under treatment in private. All venereally infected individuals are obliged to remain under treatment until fully cured. Should the mode of life of an infected individual be such that it is not certain that the transmission of the infection to others can be prevented, or should the individual in question not follow out the directions given for the prevention of the transmission of the infectious diseases to others, then the individual in question shall be compulsorily interned in a hospital. The decision concerning the necessity of such measures shall rest with the police authorities. All individuals receiving the aid of the public charities shall, in the case of an infection of this type, be transferred to the hospital."

"Section VI. If, during the course of the treatment, or after the completion thereof, it seems advisable to the physici-

ing during a particular case, to keep the patient in question constantly under observation, then this physician shall set for the patient specified intervals at which the patient is to visit the physician for the purpose of control. Should a patient not comply with the regulations, or remain away in spite of notification to appear for treatment, then the physician treating the case shall send a notification to that effect to the city physician. The city physician shall then take measures providing for the treatment of the individual by one of the communal physicians."

"Section VII. Every physician treating venereally infected individuals shall draw their attention to the dangers of the disease, and also to the legal consequences of a transmission thereof. He should particularly draw the attention of the diseased individual to the dangers of entering upon matrimony during the course thereof."

"Section VIII. Every physician shall, in his weekly report to the city physician or the district physician, particularly state that he has observed the regulations contained in the foregoing paragraphs, and give the number of individuals whom he has ordered to call upon him, in accordance with the provisions of Paragraph V. Breaches of Paragraphs VI. and VII.,

or of this paragraph, are punishable by a fine up to 200 kronas. Any individual who gives a physician a false name or occupation or dwelling, will be punished according to the provisions of Paragraph 155 of the penal code."

Other sections relate to the nursing of syphilitic infants, compulsory medical examinations, the hospital care of venereally diseased individuals, etc.

The regulations recently issued by Australia are apparently based on these.

Chicago in 1911 added to their Sanitary Code an ordinance requiring the reporting of all cases by numbers.

This is also required by eleven States in the Union and seven Cities.

There will necessarily be difficulties to encounter in carrying out these regulations, but these difficulties are in many respects similar to those encountered in the reporting of tuberculosis. The one main difference is the act through which the disease was contracted. These must be divorced, and the diseases handled as any other communicable disease. We must not forget that the great pre-disposing factor in the contracting of these diseases is the sexual appetite, which, once aroused, is as natural as the appetite for food.

THE ATTITUDE OF THE HOSPITAL

C. K. CLARKE, M.D.,

Prof. of Psychiatry, University of Toronto.

Mr. Chairman and Gentlemen:

A few years ago when Superintendent of the Toronto Hospital for the Insane, it became apparent to me that gradually the admissions contained more and more cases of General Paresis. All of these patients were of course suffering from syphilis. A careful survey of the figures revealed the fact that twenty-five per cent. of the male admissions were syphilitic, a startling proportion.

When I transferred to the General Hospital service it was soon apparent that venereal diseases were steadily on the increase in the community, and in a small clinic conducted for the feeble minded, no

less than seventy-nine paretics came under observation in about a year. Many of these cases had congenital syphilis—in other words were the victims of an inherited form of this malady.

The prevalence of this disease among children—very largely the offspring of recent arrivals in Canada, was significant.

So commonly was the general out-door department attended by people asking for treatment for syphilis that we were forced to develop a special clinic for venereal diseases, open for three days and one evening in the week.

What happened when this was established, made us look further, and it was

thought advisable to make a careful examination of the blood of every public ward patient entering the hospital.

What has been discovered in the clinic for feeble minded, in the special clinic and in the general wards, is the basis for an argument before this commission.

The facts and figures to be presented to you by the speakers who follow me, will prove conclusively that the time has come for the establishment of drastic legislation to control the evil.

The situation is a serious one, and the importance of it will be thoroughly appreciated by those who have been following the world-wide movement for the suppression of venereal diseases.

When it is learned that more than 12 per cent. of the patients admitted to the public wards of the Toronto General Hospital, for various diseases, medical and surgical, have syphilis, it will be realized that we are dealing with an acute situation, as the facts which apply to that institution are merely an index of the prevalence of syphilis in the community.

The menace to the health of the nation is perhaps greater than that of tuberculosis, as the problem is so much more difficult to deal with, and the subtle manifestations of the malady are so much more involved and obscure, as well as not easy to treat.

If registration of the tuberculous is desirable, the same argument is doubly applicable in the regulation of syphilis.

No false sentiment, no desire to shirk our manifest responsibility should be encouraged. It is a case where a spade should be called a spade without the least hesitation.

In tuberculosis it is possible to control infection; in syphilis it is extremely difficult to do so for reasons that are self-evident.

One of these reasons is, that prostitutes are the source from which the greater part of the infections come—carefully compiled statistics showing that 75 per cent. are traceable to the women of the street.

As 60 per cent. of all prostitutes are feeble minded, a serious situation at once faces us in Canada, as very little intelligent provision has been made for the care of this class.

To show how this works it may be said that in our clinic a few weeks ago we had under observation at one time, a feeble minded girl and five men she had recently infected with syphilis.

In the Old World the problem has been faced for some years with varying success, and since 1874 and 1876 Denmark and Norway have employed a system of compulsory registration.

In England at the present time a large number of the best people in the realm are moving actively, as the menace has grown to such proportions, and in Canada we must find some solution of the present difficulties.

In Western Australia advanced legislation went into force on December 8th, 1915. Bill No. 55 of 1915. An Act to amend the Health Act, 1911-12.

This is no doubt the most advanced legislation of the kind in existence, and deals with the following subjects, among others, "Venereal Diseases, Their Treatment by Medical Practitioners only—

Persons suffering from these diseases must place themselves under treatment and keep themselves under treatment until cured.

Medical practitioners are to report cases of venereal diseases under treatment by them.

Name and address of patient to be reported on failure to continue treatment.

Certificate of cure to be given.

Bacteriological examinations to be made free of charge.

Compulsory examination and treatment under certain conditions.

Subsidized hospitals or salaried medical practitioners to give free treatment.

The prohibition of quack cures.

Secrecy to be preserved etc."

The Act is an excellent one and full of suggestions worthy of the greatest consideration in Canada.

In the city of New York advanced legislation is in force and follows along the general lines indicated in the Western Australian Act.

Many educational pamphlets are also issued both in Australia and New York. These are available for public use. They treat of such subjects as the following:

To warn persons not infected.

To warn and instruct persons who are infected with these diseases so that they will appreciate the absolute necessity of treatment.

To arouse a desire in the persons who have been infected to know absolutely whether they have been cured.

It is a matter of opinion among the majority of Sanitary Officers that no distinction should be made between venereal and other infectious diseases.

If this be admitted there must be intelligent educational campaigns, proper prevention, effective isolation and persistent treatment.

Venereal diseases stand pre-eminent as a menace to the race and incidentally to the nation. The physical and social evils following in their wake are well known to the whole medical profession. When we realize the immediate and remote results of infection that is not treated, and contemplate the horrors entailed by a possession of these vile diseases, we shudder

for the future of civilization, and marvel that the Health authorities have not risen in violent protest long ere this.

In Canada we are rapidly reaching a condition not much better than that in the Old World where venereal diseases have played such a prominent part in the degeneration of the race. Not only that we must not shut our eyes to what is likely to occur when the war is over and the returned soldiers are to be cared for. We might as well face the probabilities squarely and make proper provision.

In all armies venereal diseases are rampant—the armies of today are no exception to the general rule and the proportion of diseased among those who have already some home is alarming and disturbing. We may well ask what shall the harvest be in the near future? There is abundant reason for anxiety and those who remember what tragedies resulted after the Boer War will readily appreciate the force of our contention.

THE VENEREAL DISEASE PROBLEM FROM THE MILITARY STANDPOINT

By Gordon Bates, Capt. A. M. C.

THERE is no doubt that the venereal disease question as a problem capable of solution has been one largely neglected in the past perhaps because only recently have we begun to understand it. Something of its extent has already been brought before you by the previous speakers and I need not remind you that as a factor in the production of the suffering, social misery and economic loss which disease produces it looms very large. Peculiar conditions existing at present render it a question which should command our attention.

The presence of large bodies of troops in the community and the prospective return of perhaps 400,000 soldiers from Europe with the well known frequency of venereal infection among the troops must make us anticipate a spread of infection through the community and an exasera-

bation of conditions which already seem almost as bad as possible.

Conditions among troops in Canada may be only inadequately represented by the fact that in the year between April 1st, 1915 and March 31st, 1916, 3,034 venereal cases were reported among men training in Canada and in May, June and July, 1916, 1,981. Large as these numbers are the lack of a routine Wassermann reaction and the possibility of many latent cases of gonorrheal infection make the real number much larger. The number of venereal cases among the Canadians in England is as we all know very large, so large that the resulting public health question which demands solution is very obvious. What shall be done to prevent the spread of infection from these sources which at present are very largely under military control. The question of

getting venereally infected men back into the ranks as quickly as possible, with a minimum impairment of efficiency is part of the problem because efficient treatment applied at the earliest possible moment means more certain cure. In passing a glance at the treatment phase will be in order.

As the routine methods of treatment and follow up methods I can only speak, of course, for Toronto. Here the necessity of supervision and of every case daily has been borne in on us. Careful scrutiny of classes of cases presenting themselves have made a few conclusions possible.

The rarity of uncomplicated chaneroid (95 per cent. of our penile sores have been syphilitic) has made us chary of accepting this diagnosis. The fact that 50 per cent. of primary cases of syphilis with a negative Wassermann may be aborted by vigorous treatment has resulted in a cutting down of stay in hospital, duration of disease and permanent injury to infected men.

Early treatment in both gonorrhea and syphilis is of the utmost importance. Gonorrhea if treated immediately can be cured within a week and although the average stay in the Base Hospital of acute cases during the month of December was 19 days we have a number of typical cases which will prove that this time can be cut down considerably. The fact that posterior urethritis with all its complications, its possibilities of deep seated infection and serious end results is almost invariably avoided in cases which are cured rapidly is not without significance.

Cases in which the diagnosis of hard chancre is made are kept in the hospital for at least a month if a positive Wassermann does not develop. If a positive Wassermann reaction does develop or has already developed discharge from the hospital is delayed until the Wassermann is negative. Cases of chronic gonorrheal infection are not discharged until the absence of gonococci from prostrate vesicles and urethra is demonstrated. It is not, of course, enough to discharge infected men when they seem to be cured. Some effort must be made to see that they leave the hospital exponents in some degree of

public health ideas, desirous of seeing that they are completely cured and of taking care both that they shall not be exposed to infection in the future nor spread infection to others. They, their wives and families and the general public must be protected.

With this idea in view a system of discharge parades has been instituted. At these parades men are given instructions as to the dangers of venereal disease and as to the necessity of careful supervision until permanent cure is certain. In the case of syphilis, mercury and periodic Wassermanns are insisted upon after men return to the ranks. A follow up system has been instituted in order that any failure to report for blood examination may be discovered.

So much for what we are already doing. Some suggestions as to future control of the situation may be in order. The question of the use of direct preventives has been mooted and may be adopted. A description of the use of such preventives in the case of men who have been infected has appeared in a recent headquarters order. As in the United States navy men who have been exposed to infection and do not report for prophylactic treatment are to be punished if they develop venereal infection.

Perhaps more important than this is the education of the men in the dangers of venereal infection. The film play "Damaged Goods" has been used by the Y. M. C. A. with great success among the U. S. troops on the Mexican border and it is proposed that it be used here in Ontario. It is hoped also that some sort of permanent exhibit illustrating the dangers of venereal infection and liability of infection from promiscuous intercourse may be secured. An exhibit of this sort shown at Coney Island last summer under the auspices of the New York Social Hygiene Association. This exhibit was visited by 20,000 men during the two months and proved to be very useful from an educative standpoint. Examples of the posters which were used at this exhibit were as follows:

A vigorous educative campaign would doubtless prevent many initial infections.

The question instructions for men already infected has been touched on. It is proposed to continue the instruction and to give it more stability by the issuing of printed cards. I have samples of cards here to-night.

One or two suggestions more may be mentioned.

Very little has been done in the investigation of the sociological aspects of venereal diseases. I hope that an opportunity may be given for the investigation of this phase of the question and propose if it is feasible to investigate the social relationships of each venereally infected soldier.

One sociologic fact which has its significance is the rapid fall in admissions to venereal wards since September 16th and the advent of prohibition. The figures are as follows. I only regret that I can not give an exact estimate of the number of troops from which these cases were drawn.

Venereal Statistics July, August, September, October, November, December, 1916.

Daily average number of patients in hospital, 1916: July, 111.6; August, 147.8; September, 165; October, 126.1; November, 70.6; December, 54.5.

GONORRHOEA.

	Admitted	Average Daily Admissions.
July	152	4.9
August	124	4.
September	83	2.67
October	66	2.12
November	53	1.70
December	35	1.01

SYPHILIS.

	Admitted	Average Daily Admissions.
July	22	.71
August	22	.71
September	5	.16
October	7	.22
November	6	.19
December		

The fact that undoubtedly many men are discharged and will be discharged from the army while still venereally infected must be an obvious one. It would be well to consider the advisability of a routine Wassermann reaction and venereal examination by competent examiners for every soldier before his return to civil life.

The prospect of letting loose an army of venereally infected men—and so many men in the army are or will be infected that they will constitute an army themselves—is not to be thought of. The fact that soldiers are under military control and that military regulations make the application of medical measures to everyone easier than in civil life is a strong argument in favor of the immediate adoption of such a policy. The performance of routine Wassermanns in Base Hospitals where facilities for performing them already exist should also be undertaken.

The success of the recent campaign in Toronto to provide care for the feeble-minded has borne in on many of us the fact that proven facts impress the public and public opinions must be behind any legislation we may press for in the future. Here is an opportunity for gathering statistical evidence which should be very valuable.

Concurrent with action on the part of military authorities measures for dealing with the venereal disease question in civil life should be taken up more vigorously than ever. Facilities of all sorts both for diagnosis, treatment and prevention must be multiplied—and this last implies a campaign of public education of a sort which we have not as yet more than thought of. Indeed, one cannot close a paper on this subject without saying that our whole attitude towards the question of venereal disease must change if we hope to stamp it out. We cannot banish it by refusing to talk about it any more than the ostrich can eliminate his enemy by burying his head in the sand. Unfortunately, I believe that there are still members of this Academy who will only speak the word syphilis with bated breath—for fear the angels will hear.

The venereal disease question is a public health question just as much as tuberculosis—indeed more so because it is a more serious public menace. Even in conservative Ontario—I speak of temperamental Ontario not political Ontario—we must drag it from the secret recesses where it has remained hidden so long. Investigate it, report it, if possible, provide

free laboratory facilities for its detection, treat it—and insist on treatment whether the patient has money or not, multiply educational activities, and we will be doing much to minimize the dangers which war conditions have increased. It will not be less to our credit that we are well on the road to the permanent solution of a question whose seriousness is the best excuse for our actions.

DISCUSSION

Dr. H. B. Anderson: I would like first to congratulate the capable and energetic Chairman of the Section for having brought forward this subject, which is certainly one of the greatest present interest.

I regret that I have not had abstracts of the papers that were to be presented, so that one might be able to discuss them more intelligently.

Now, even before the onset of the war, it was evident that this question of venereal disease would have to be dealt with as a great public health question. Those who were present at the meeting of the International Congress in London will agree with me, I think, that the question of venereal disease was the one of outstanding interest. Shortly after that Congress the Royal Commission of the British Government was appointed to report upon the whole question. Those who have read the report of the Royal Commission must have been impressed with the lack of accurate information and of sufficient data upon which to base any intelligent course of action. The statistical side of it seemed to me to be lamentably deficient.

The work in regard to this investigation of venereal disease has been interfered with by the war, but owing to the large mortality which has occurred during the war the matter has become one of even greater importance than it was before that time.

If this matter is going to be dealt with as a public health question, it seems to me

exceedingly important, as some of the speakers have already brought forward, that the lead should be taken by the medical profession, and that we should educate public opinion in such a way as to avoid some of the over-statement, and the tendency almost to panic at times, which has occurred in regard to the crusades against tuberculosis, cancer, poliomyelitis, and so on. If we get the matter placed on a scientific basis, with proper data, and deal with it in a conservative way, I think it would be a very great advantage.

Another thing which, I suppose, appeals to all of us is the fact that since the discovery of the spirocheate pallida, the Wassermann reaction, diarsenol-bensol, the importance of examination of the spinal fluid, the relationship of spirochetes to tabes and parasis, etc., the whole scientific and statistical side of the syphilitic question had to be built up again and former information practically had to be scrapped. Our knowledge is being built upon newer and surer foundations.

Now, in regard to the statistics that have been presented as to the disease in hospital practice, I think the results from the General Hospital are exceedingly low, and that if we would take a larger number of cases for a longer period we would find that in the hospitals a much higher degree of infection would be shown.

Some years ago I had an investigation of all the cases under my care coming into St. Michael's Hospital for a period of three months, and we got positively a

reaction in 48 per cent. of the men and 65 per cent. of the women. That represents a marked overstatement of what the ordinary percentages would be, but it was before the war at a time when there was a great deal of distress in the city and a great many foreigners and immigrants were in the hospital then. While I think that is an overstatement, still I believe that 12 per cent. would prove to be an understatement. If 16 per cent. represents the cases in the population, evidently the hospital statistics would be much higher.

Coming to the matter of the laboratory diagnosis of syphilis, of course, the importance of that cannot be overestimated. However, I cannot help but think there is a tendency to depend too exclusively at the present time upon laboratory methods to the exclusion of the other points in the clinical diagnosis of the disease. We have got to remember that, although laboratory diagnosis is available in the large centres, that is not the case throughout the country at large, to some extent, and I believe a great deal can be done by a careful study of the clinical signs of the disease apart from the laboratory tests. If we had a more careful study of the evidence of syphilis, such as the presence of iritis, residual enlargement of lymph nodes, the significance of scars upon different parts of the body, etc., I am quite sure it would add very greatly to our ability to recognize the disease. Laboratory tests should be taken only as a part of the whole clinical picture rather than being considered the one essential feature.

Now, coming to the matter of dealing with venereal disease, theoretically these diseases must be considered to be preventible, but difficulties arise from obvious moral and social considerations in the way of carrying out proper measures as readily as in the case of other contagious diseases. However, the same principles must apply, if prevention is to be carried out at all successfully as in the case of other diseases. There must be notification of cases, their segregation and control as far as possible, avoidance of infection of the innocent, facilities for diagnosis, proper hospital accommodation and outdoor facili-

ties for treatment, and where necessary provision of remedies, which are often expensive, at the public expense. If remedies are to be provided at the public expense as a matter of public interest, the cost should be regulated, and, if possible, their manufacture and distribution undertaken by the Health authorities, as in the case of antitoxins, vaccines, etc., so as to avoid any private monopoly in the case of the indigent.

Some of these measures would meet antagonism, opposition, on moral grounds in this country, and that the greater security the public might feel in regard to avoidance might lead to an increase of immorality, etc. The security, however, is often a false one, yet undoubtedly the fact remains that in countries like Japan and Germany, where moral restrictions are practically thrown aside, and where the matter has been dealt with purely from the materialistic point of view on scientific grounds, the results have been better—that is, so far as the cases occurring are concerned. That is shown particularly in regard to the incidents of venereal diseases in the army and in the navy. In Germany, for instance, in 1905-6 the percentage was 19.8 per thousand, France 28.6, Austria 54.2, Russia 62.7, United States 167.8 and the United Kingdom 68.4. Certainly no person who has any knowledge of Germany, and this is borne out by the statement made by Dr. Hastings, would attribute it to the fact that they are less exposed to the possibilities of infection than the people in other countries.

The results of prophylactic treatment in the German army have been very instructive. That is, the use of calomel ointment is recommended as a preventive against syphilitic infection. There has been a remarkable decrease in the number of cases where used.

I would not attempt to deal with the many important questions that have been brought forward. Nothing has been said with reference to the occurrence of syphilis without any local lesion. I saw a case a few years ago where a doctor infected himself in the ball of the thumb. He immediately disinfected the part but in the course of six weeks he developed generalized infection without any local sore what-

ever. The disease had run for about nine months before the introduction of salvarsan. He had been treated with full doses of mercury in the meantime, but never showed a positive Wassermann test. After one dose of salvarsan the desired result was reached, which was the best I have ever seen from a single dose.

Dr. Hastings spoke of the percentage of abdominal operations in women being 75 per cent. from this disease. Those having to deal with cases in private practice will agree with me that that is a very great exaggeration. That may be true with regard to hospital practice, but I think it would be too bad if the public got the idea that any such proportion of cases as that was due to gonorrheal infection. I don't believe there is five per cent. in my own practice. You take peritonitis, uterine conditions, and so on, and you will realize that number given is a very great exaggeration.

Dr. Bates spoke of the rapid cure of gonorrhea, when properly treated, in some cases a cure taking place within one week. I think that is a very optimistic view to take. In many cases the cure is not real. I had a case where a patient had a gonorrheal infection for 15 years. He was married and had three healthy children, never having shown signs of the disease in the interval. He was operated on for appendicitis and the was full of gonorrhea.

I believe there are cases where the infection has remained dormant for 12 or 15 years to be stirred up by some form of local irritation.

The point which Dr. Bates makes in connection with the diminution of the number of cases of venereal diseases in the base hospital is one of the most instructive facts brought out to-night, showing the relation of alcohol to venereal disease, and that since the passing to a certain extent of prohibition measures these cases have decreased to such an extent—it is most striking.

One other point. Speaking from the point of view of a physician, I think in dealing with treatment of these diseases that we should avoid unnecessary pauperization. I believe it pauperizes the community too much by providing free

treatment, and that sort of thing. To a certain extent I think it is unnecessary. Attempting too much as a public health measure would probably cause the patients to conceal the fact that they had infection in them. As long as the public health authorities are notified, know of the cases, are assured that proper precautions are being taken, that a proper treatment is being carried out, that should serve all the purposes. I believe that hospitals generally should be provided with the means of diagnosis, the means of carrying out proper treatment, and the medical profession as a whole should be instructed. I don't think this should be a matter for any particular institution or institutions, any small number of clinics or any group of men. I believe the medical profession as a whole, if instructed as they should be instructed and given the facilities that should be given to them, are thoroughly capable of handling the treatment of that disease, and by dealing with the matter in that way, interesting the whole body of the profession, you will get a backing in carrying out the matter of reporting and in carrying out the other necessary measures in attempting to regulate the disease.

I agree thoroughly with what has been said with reference to quack literature, the ill effects of that, and that means should be taken to control that sort of thing as much as possible.

The Chairman: Dr. Watson says that in the Toronto General Hospital 25 per cent. of major operations of women were due to gonorrhea.

I may say that gonorrhea cases can be cured within five days. I am not prepared to make a report at present. I also may say that cases we treat in a week are not discharged before they are cured.

Major Fitzgerald: (Read paper).

Dr. Detweiler: Mr. Chairman and fellow members.—I wish to refer to a few things in a very rapid manner, which occurred to me when the discussion was going on.

One of the important things that Prof. McPhedran especially emphasized was the lack of symptoms.

Regarding the stopping of treatment, there again a very important question is

brought out. Treatment should not be stopped after the test is negative, but should be continued. We don't know for how long, but certainly a test should be made every month, and then every six months, say, and then every year, until we are perfectly satisfied after a number of years have elapsed that the disease will not return. Of course, we have several cases which have returned after giving a negative test.

It is exceedingly important to remember the case of Prof. Martin (?) in Ann Arbor, in which he has demonstrated that in cases which have apparently been cured the disease has afterwards been found. I have specimens of his work after a clinical cure has been obtained. The patient has come in for some other disease, has died, and the autopsy has demonstrated the organism. While his work is rather pessimistic, we should take it for what it is worth, and cases should not be discharged as cured before we have done all we can.

Another point is that in cases in which we cannot obtain a negative test, this can be done by a special Wassermann test. Those cases which are slow to respond when the ordinary test is applied, would be reported very strongly positive, yet in the high dilutions have shown a weakening of the test.

The question of legislation has been taken up by the Conservation Commission of Canada as a federal matter. They have felt, with the evidence that has been submitted to them, that legislation with regard to this should emanate from the Federal authorities, and through them the Provincial Boards of Health should co-operate towards the prevention of this disease. The machinery necessary for such legislation is certainly very intricate and cannot be settled in a short time, but the reception which they gave us in Ottawa was of the most flattering kind. Many of the laymen appreciate the significance of the devastation of this disease, and in a personal conversation with the Minister of the Interior he expressed the opinion that the medical body, such as this Academy, for instance (he mentioned it in particular), should memorialize the Government by resolutions that they are

behind such a thing as the Commission is advising the Government to do, so that they may feel they have behind them the support of the medical profession of Canada.

Dr. Hair: Mr. Chairman, in looking over the subject of syphilis as I see it at the present day we have a comparatively successful treatment for early and secondary or a little later syphilis, but not a very successful treatment for the later stages.

As to the prevalence of the disease I think we have abundant statistics. Dr. Hastings has copied his statistics of New York for about the year 1901. If he goes to the statistics of 1914 he will find that they claim 25 per cent. of the population of New York has venereal disease.

As the question now stands it brings us to the point that we don't know our genitary urinary disease. During the past year I have had a chance of examining close up to 400 patients in our clinic, to ascertain as far as possible the source of the infection. (I am told by some people they didn't tell us the truth; perhaps they don't.) Here are the points that struck me: Last year we got 8 per cent. in our primary cases, 18 per cent. in our secondary cases, and the remainder of the 50 some odd per cent. in the tertiary stage—a few congenital. One thing that struck me was that in the primary stage there is not such a thing as a typical lesion for the transmission of syphilis. I have seen all degrees from the pin size to the size of a copper. You don't get a typical chaneroid in 5 per cent. of your cases.

This next year we feel at our clinic that we want to spend our time especially in finding out the disease in the primary stage, because if the success of treatment depends on the finding of it in the early stage then we have got to diagnose it earlier than even our Wassermann tests.

You can get syphilis or a chaneroid from urethral discharges—you can get syphilis discharges.

Then there is another way by which it is very often transmitted. We had 26 women last year that contracted syphilis (out of 368) by becoming pregnant to a syphilitic man. I am not going to tell you whether there was chancre there or not. They had no evidence of a sore or vaginal discharge.

Dr. Anderson spoke about the history. I think it is most important when you handle three or four hundred cases, and find out the number that will come without any knowledge of how they contracted the disease it makes you sit up and take notice. Last week we had two cases, both in the secondary stage; both asked me where he had got it. I said, "I cannot tell you." They said they had got it in a boarding house.

There are two reasons why prohibition will lessen venereal disease. First of all, there won't be the same chances taken when a man or woman is sober, and, next, alcohol predisposes to infection.

I think there should be Dominion legislation. I think, and it was told us in Ottawa, that the tubercular question could have been more easily handled if all the provinces had had a concerted action from a Dominion head. They may have a law in Ontario, as they have one on prohibition, and they may not have one in Montreal (laughter), and you know what that means. We are so close to Quebec, so how are you going to prevent the spread of the disease unless the matter is taken up as a Dominion measure. I was in the Montreal clinic last week. A woman was there with two babies who had acquired syphilis—one baby two and the other five. I could understand how the mother got it, but the question was how did those children acquire syphilis?

Dr. Hamilton: May I speak for a moment. I was very much interested in the figures given in reference to the percentage of syphilitic and venereal cases in the German army, and, while I would not like to be considered as holding a brief favoring state control of medicine, or nationalization of the practice of medicine, this fact must be borne in mind that the German soldier and citizen is under very much more careful control than the British. The individual is practically a vassal of the state. He is cared for, he has an insurance, medical attendance if he has an income under \$750 a year. More than that, the state has most drastic power. A servant may be ill in the house, a physician comes in, examines the case, determines what is required, and has power to send that patient to a hospital and

order him to have an operation if necessary. You can easily understand how that would limit disease to a marvellous extent among the poorer people in our cities. We may not be quite ready for that state of affairs here, but I think it has something to commend it in large centres. That is done freely by the state at an enormous cost, but it shows how progressive they have been in the treatment of their poor people. That, to my mind, in newer countries would perhaps tend to a degree of pauperization that we would not like to see instituted, but at the same time it does help us to see that with the very wide powers which our Boards of Health have—if they are enabled to use what legislation they have—and the power of the Provincial Board of Health, if they could see their way clear (I believe they have the legislation now, as syphilis comes under the heading of "Communicable Disease"), with co-operation of the profession and education of the laity, that in each of the provinces cases could be controlled in such a way that it would avoid drastic legislation and not expose the individual who happens to be infected. Because if you do you defeat your ends. If there is a possibility of the individual being exposed and his domestic life being laid bare, he will not consult a physician, but will turn to a quack, and not recover from the disease. So that I am firmly of the belief that treatment for the cure and prevention of this communicable disease should be undertaken by the Federal Government through the Conservation Commission. I do believe that the carrying out of that law should be given to the Provincial Boards of Health, acting through their Local Boards. It may not be true that we have such an efficient Public Health Act in other provinces as we have in Ontario, but, if not, it can be secured, and it is one step in the right direction.

That being done, you will place the treatment and prevention of venereal diseases on a much broader basis than in any other way.

At the present time, what difficulty have we in treating the other infectious diseases? None whatever. In a short time the infection of syphilis would be just as

easy to control, and I, therefore, would favor placing the whole subject on as broad a basis as possible, and if I am in order would offer a motion.

Moved that the Academy of Medicine be asked by this Section to name a committee for the purpose of conferring with several bodies interested, to confer with the Canadian Medical Association, the Ontario Medical Association, and the Provincial and City Boards of Health, for the purpose of approaching the Provincial Secretary of Ontario in reference to taking proper steps to secure the co-operation of the Federal Government in the treatment of venereal disease.

Dr. Ferguson: I have much pleasure in seconding that motion. There is no use at all at this moment for me to go into the discussion, it has been so lucid and able. We all know action is now required. One of the first stages of successful action is dissemination of information, education, and a motion of this kind will surely appeal to the Fellows of the Academy and to other medical associations. (Carried.)

Dr. McPhedran: Shouldn't that be not to the Provincial Board, but to the Dominion House? The Ottawa Government have power to take any steps they think proper.

Dr. Hamilton: We have to begin somewhere. We must have some means of approaching the Dominion Government. I would be sorry indeed to think that anybody was of the opinion I had overlooked the Dominion Government.

Dr. Hastings: If I may make a suggestion in that connection, all health matters in the Dominion of Canada are handled by the respective provinces under their Provincial Health Acts. This is essentially a Public Health matter. I think we would make the most headway by having a committee, such as Dr. Hamilton has suggested, wait on the Provincial Board of Health, and there would be no trouble whatever, in my judgment, or danger of the Provincial Board of Health slightly modifying the regulation which the Act provides for, as the Act says

"as specified in the regulations. If the particular disease is not mentioned in the regulations, we had the same difficulty in connection with tuberculosis. Up to two years ago tuberculosis was not mentioned in the regulations, but the other communicable diseases were. However, two years ago they added tuberculosis to these regulations. All it is necessary for the Provincial Board of Health to do is to add venereal disease to the regulations. This will make it operable so far as the Province of Ontario is concerned, and there is no doubt in my mind, if the Provincial Board of Health felt they had the Academy of Medicine behind them, and a recommendation came from the Academy that this disease be incorporated, there is no doubt in my mind that it would be incorporated. The Federal Government might be approached by the Canadian Medical Association, which is a Dominion wide Association.

Dr. I will tell you what steps have been taken. The Chairman of the Conservation Commission, in conversation, I think, with Dr. Goldie, asked for a report on the prevalence of venereal disease. Now, that is as far as it has gone. The report has been presented, and the Conservation Commission felt that they, as a representative body, would be in a position to hand the knowledge they had up to the Federal Government.

They asked for one further thing, which at the present time, I think, is being discussed, that a draft law of some kind be presented, so that they could get some idea of what was asked, and that has been done along the line of the Western Australia Act, but a few points have been changed.

Another point: They have asked that a supply of the statistics that were presented to them be printed and handed to each member of the Federal Government.

The motion, as I see it, would only give acquiescence from either the Secretary or the Provincial Board of Health that these persons will be willing to go ahead with the work that has been done.

11.30, the meeting adjourned.

The Sanitary Inspectors' Association of Western Canada

THE NEED FOR SANITARY CONTROL AND A MINIMUM STANDARD OF HOUSE CONSTRUCTION

By F. Cartlidge, F.I.S.E., M.R. San. I.,
Chief Sanitary Inspector, Moose Jaw, Sask.

Read Before the Winnipeg Members.

IN the September issue of the Bulletin of the Commissioner of Conservation of Canada, there is a brief article entitled "No room to live in Canada," which details the existence of housing conditions in a small Western City, a parallel of which it would be difficult to find in the worst slums of the Old Country cities today. Ten dwellings and two stores of one storey stand on a twenty-five foot lot, the depth of which, though not stated, would probably not exceed one hundred and twenty-five feet. This very economical employment of land was accomplished by having a three foot passage down the centre of the lot upon which the ten dwellings face each other. The Sanitary accommodation comprised two outside closets at the lane end of the lot, possibly upon the lane itself, for we may be pretty certain that any community that was lacking in authority, or so lax in administration of the same as to allow such an arrangement of dwellings to continue, would be equally defenceless against encroachment upon its highway. While this instance may be an illustration of one of the worst forms of over-crowding on space to be met with in this country, it is typical of the defective housing far too commonly met with in the dwellings of the artizan and laboring class.

But over-crowding in the houses is another and equally deplorable evil in our midst. One living room and two small bedrooms, the whole contained on an area

of 20 by 16 feet or less is an arrangement commonly met with. So long as the family is few in number, one of the small rooms is often used as a pantry or food store; but with a large family and both bed rooms in use, as evidently intended to be by the builders, no provision whatever exists for the keeping of food, beyond the living room, where a small cupboard is framed in the timbers supporting the brickwork of the chimney, or maybe a dugout, devoid of light or ventilation to which the entrance is by a trap door in the floor of one of the rooms.

Under such conditions it is impossible to keep food for many hours in the hot summer months without seriously affecting its fitness for human consumption. Milk, though received in bottles, pasteurized and cooled, cannot possibly remain in a fit state for the feeding of children where it has to be kept under such conditions during the whole of the twenty-four hours which must elapse before the next call of the milk man; and yet such is the case for at least four months every year, the same applies to other foods. For personal ablution and the weekly washing of clothes, no provision whatever is made. Roughly speaking not more than 50 per cent. of the houses are so constructed as to be able to take advantage of connections with the sanitary sewer or water mains where these utilities exist. Consequently we have the usually more or less insanitary outside closet, a sewage sodden patch of ground where the waste

liquid and domestic slops are dumped, and a water supply either second hand from the water wagon, or from a surface well on the lot and in serious danger of pollution by the aforementioned method of slop disposal.

Even worse than this is the two room shack, and the one room apartment in a tenement block, the existence of which throughout this western country, you are well aware, is all too common, but one class at a time is enough to illustrate the point. And these are the homes of nearly half of the population. What wonder then, so many deaths are due to consumption in adults, and infantile diarrhoea among children. But it is not necessary to accentuate the defects in a type of dwelling with which, as sanitary inspectors, you are all too well acquainted, but rather to suggest some method by which the conditions can be improved or eliminated.

The absence of proper sanitary control in the construction of dwelling is largely responsibility for the existence to-day of thousands of shacks and small houses with the very meanest accommodation for decent living.

In the early days of settlement, dwellings that were quickly and easily constructed at little cost, were a necessity, the shack succeeded the canvas tent, and the shack remains, notwithstanding the development of rural into urban communities.

The high rents of the past, and a desire to be his own landlord, induced many a man to purchase a lot and, with his small capital, to build himself a shack, doubtless intending this to be only a temporary dwelling. But, as time went on he got accustomed to his little kennel, and oft times let it stop at that. In other instances these shacks are erected by speculative owners on land that is well within the populous area of a town or city, even on the sewer and water line. They cost so little, that in two or three years the rent charged has returned the whole capital invested and paid the taxes also.

It is to this latter class of house production that the restrictive powers of

local Authorities' By-laws need to be specially directed and enforced, but unfortunately, few governing bodies have provided themselves by existing regulations with the necessary authority. Also everything else, fire protection, stability, heights of buildings, thickness of walls, elevators, and so on, in fact all but sanitary control and the rudimental principles of hygiene are left to the individual conception of the builder whose chief purpose is cheap production.

Surely a plea for at least a minimum standard of house construction, and the enforcement of sanitary provision may be advanced at this stage in the development of our country.

Much is heard of the tide of immigration that is to flow Westwards after the war, in which case many new comers will seek homes and employment in the urban districts. Most of the unoccupied dwellings are of the smallest type and meanly constructed, devoid of the means of comfort or convenience, and any repetition of these should be avoided in the future.

And by what means, let the scope of present building regulations be extended, where necessary, by including and fixing a minimum standard regarding the building site, size and height of rooms for dwellings; which must comprise a room for food storage, the necessary sanitary conveniences, water supply, and drainage; and then insist, through competent inspection, that the regulations so provided shall be observed, and that no house be allowed to be occupied until certified by the proper Health Authority that it is fit for occupation, thus giving at least a proper start on its career of usefulness.

Other phases of commercial betterment are being largely discussed at this time, town planning, good roads, social intercourse, and so on, all beneficial and very desirable, but as the building up of a nation depends largely upon the home life of the people, let it be that first of all such dwellings are provided as will house its inmates under conditions conducive to good health and comfort, without which they can be neither happy, prosperous or contented.

THE PUBLIC HEALTH JOURNAL

MONTHLY JOTTINGS

The new Executive have had several interesting meetings. Mr. Watson, the President, presided at the first meeting. As he resides in Regina, however, the chair is taken in his absence by Mr. W. J. T. Watt, the Vice-President for Manitoba.

Following up the suggestion made at the Annual Meeting the Secretary has written Christmas letters of greeting to all of our members on Active Service, except two whose addresses he has been unable to ascertain.

Read the rules for our Prize Essay Contest and get busy. The Committee would like to receive a large number of papers.

As the judges are barred from entering the contest this ought to encourage some of our younger members to send in papers.

We are glad to note that the Regina members are planning for an interesting Winter session. See their programme given below.

The Winnipeg members decided by way of a change this season to organize a First Aid Class under the auspices of the St. John's Ambulance Association. They have a class of 25 and full equipment of books, charts, bandages, etc. The Board of Control of the City of Winnipeg showed its appreciation of the class by making a grant of \$25 towards defraying the expenses. In addition to Dr. Sharman as lecturer they have the assistance of Mr. H. B. Weston, one of the members, who had 15 years experience as a Sick Berth Steward in the Royal Navy and who is unusually proficient in the work.

It is intended that about once a month a lecture on some sanitary subject will be given. The first of these was given on November 18th by 2Mr. Weston on "Infantile Increase and Child Conservation." The lecture was much enjoyed and provoked an interesting discussion.

The Board of Health for the Province of Manitoba is continuing its good work. Recently they promulgated regulations (a) prohibiting the use of Hydrocyanic acid gas for destroying vermin in dwellings, several fatal accidents having occurred by reason of its use; (b) prohibiting the common drinking cup; (c) prohibiting the use of the common roller towel; (d) making drastic regulations as to the occupation of cellars and basements.

The Board is now applying to the Legislature for powers to compel the inspection of all meat offered for sale. At present only meats intended for export from the Province are required to be inspected. This is done under the "Meat and Canned Foods Act," a Dominion Statute. Whilst the large abattoirs are all under Government inspection under this Act, there is a very large quantity of meat offered for sale which is killed elsewhere, mostly by farmers, and no means have hitherto been provided for the inspection of this meat, except in stores, which of course is not satisfactory.

A very interesting paper by Mr. F. Cartledge, F.I.S.E., of Moose Jaw, Vice-President for Saskatchewan, and entitled "The need for Sanitary Control and a Minimum Standard of House Construction," was read before the Winnipeg members on November 25th. After an interesting discussion a motion was carried asking the Executive to consider the advisability of preparing one or more resolutions dealing with the housing problem for submission to the next Annual Meeting.

The following is the programme of the Regina Centre for the 1916-17 Session:—
1916—Nov. 10—"Heat," W. W. Andrews, LL.D.

Nov. 24—A Hat Night, Members.

Dec. 8—"Tuberculosis," T. C. Middleton, M. D.

Dec. 22—"Experiences in the Northern Part of Saskatchewan," by A. M. S. Allen, A.R.S.I.

Dec. 29.—Social, Members.

1917—Jan. 12.—“The Principals of Sewage Disposal,” J. Russell Ellis, B.S., C.E.

Jan. 26.—“Food Values,” J. L. Mitchell, C.S.A.S.

“Elementary Applied Mechanics,” H. D. Mathias, R.P.C., A.R.S.I.

Feb. 9.—“Some Saskatchewan Health Problems, Urban and Rural,” M. R. Bow, M.D., C.M., B.A.

Feb. 23.—“Veterinary Inspection,” Dr. McClelland, (V.S.)

Mar. 9.—“Vital Statistics,” J. Martin, A.R.S.I.

Mar 23.—“Industrialism and Its Relation to Unemployment,” A. Green.

April 6.—“Overcrowding and Why It Is Tolerated,” T. Watson, M.R.S.I.

April 20—Court Case, Overcrowding, Members.

PRIZE ESSAYS.

The Executive Committee in order to encourage habits of clear thinking and correct expression amongst the members, as well as to secure matter suitable for publication in the Public Health Journal beg to invite competitive papers or essays from members or associates on any subject relating directly or indirectly to hygiene or Public Health.

The rules governing the competition are as follows:—

1. The competition is open to all members or associates except the members appointed as judges.

2. Members intending to compete are requested to notify the Secretary on or before February 1, 1917.

3. All papers shall be legibly written or typed on one side of the paper only. Manuscripts must not be rolled.

In order to conceal the identity of the writers from the judges competitors will not write their names on the papers but instead will write their names on separate slips of paper or on cards placed in a sealed envelope. The papers and envelopes attached will be numbered by the Secretary.

4. All papers must be in the hands of the Secretary on or before April 1, 1917.

5. Papers should not exceed 4,000 words in length.

6. For the best paper sent in a prize of \$10 will be awarded and for the next best \$5. The Committee reserves the right if found necessary or advisable, to award an additional prize or prizes.

7. All papers sent in are to become the property of the Association. They must not have been published previously. All papers found suitable will be published in the Public Health Journal.

8. In judging papers marks will be given for the following points: (a) originality; (b) subject matter; (c) composition and style; (d) illustrations (if any).

9. The judges appointed are: E. W. J. Hague, Chairman; W. J. T. Watt; P. B. Tustin; E. C. Brown; and W. F. Thornley.

10. The following subjects are suggested for the guidance of intending competitors:—

General.—Water Supply. Water Pollution. Air. Ventilation. Heating. Dust. Light. Humidity.

Administration—Modern Health Departments. Rural Health Administration. Duties, qualifications and powers of sanitary inspectors. A programme for future work of health departments.

Nuisances—Definitions of; methods of dealing with; smoke; offensive trades; keeping animals.

Refuse—Collection and disposal of garbage, rubbish, incombustible refuse, night soil. Seavenging systems. Crematories and incinerators. Conservation of waste substances.

Sewerage and Drainage.—Sewer and drain construction. Sewage disposal. Sewage treatment. Septic tanks.

Housing Problems—Proper housing laws. Proper housing construction. Tenements. Overcrowding on space. Overcrowding in buildings. Lighting. Ventilation. Plumbing (any phase of).

Vital Statistics, Value of.

School Hygiene.

Domestic Economy—House sanitation. House construction. Ventilating and heating. House cleaning. Food and food values. Cooking. Storage of milk and foods in the home.

Meats and other Foods—Meat inspection. Abattoirs and slaughter houses. Food inspection in general. Dairy inspection.

tion. Supervision of milk and cream. Vendors in towns and cities. Inspection of food stores and warehouses. Cold storage plants. The Use of margarine. Preservation of foods, methods of. Testing of dairy herds. Pasteurization of city milk supply.

Communicable Diseases—Tuberculosis. Essay on any other communicable disease. Methods of fighting communicable diseases. Difficulties met with in trying to control. Disinfection. Infectious Disease Hospitals. Vaccination, past, present and future. Venereal diseases. The part played by flies, rats, ticks, lice, bed bugs, cockroaches, or other animals, insects or vermin in the transmission of diseases.

Industrial Hygiene, and Diseases of Occupation—Inspection of factories and

workshops. Inspection of shops and offices.

Individual Hygiene—Importance of. Methods of education. Cleanliness. Breathing. Air. Care of teeth. Exercise. Sleep. Eugenics. Food.

Child Welfare—Methods of work. Methods of reducing infant mortality. How to deal with non-English speaking mothers.

Hospitals—Equipment. Administration.

It is not advised that all of the subjects grouped under one of the above headings be dealt with in any one paper as the treatment would necessarily be very superficial as well as lengthy. Competitors will find it better to take one or more of the sub-headings for a subject.

The titles of a paper need not necessarily be one of those given above, in fact, originality of title is invited.

LETTERS WRITTEN TO THE SECRETARY

LETTERS WRITTEN TO THE SECRETARY FROM BELGIUM BY SERGT. F. C. AUSTIN, ASSOC. ROYAL SAN. INST., ON ACTIVE SERVICE WITH THE CANADIAN ARMY MEDICAL CORPS.

AS I AM expecting a letter from you every and any mail, I am going to start on a resume of our sanitary arrangements, which I think will interest you.

Our accommodation is a matter beyond the pale, so I cannot give you that. I will say, however, that we have provision for a larger number than we have yet received. Some of this accommodation is in huts and some under canvas. The huts are without any of the plumbing fixtures that one looks for in civilian life, but they are fairly light and airy. Roughly speaking, the cubic space for each man is about 350 cubic feet. In the tents, the amount is somewhat less, but that, as you know, in regard to this class of accommodation, cuts no very large amount of ice. The tents are all trenched, the trenches following the lie of the land.

The land hereabouts is of a light colored sandy clay, with practically no top soil of loam. Water is reached at less than four feet, and therein lies our chief difficulty from a sanitary point of view.

When we first reached here, I had an ordinary soakage pit dug and rigged up a grease trap in conjunction with it. The pit was four feet deep by five by five. Since its first use, if there has been any soakage away from that pit, then I haven't noticed it. As often as it was necessary we had to pump the waste from this pit to another belonging to a neighboring unit, from whence it has been pumped into a ditch alongside the road. This ditch, I may say, has very little fall. Waste water only is dealt with in this manner — kitchen waste and such like. It is not the best system of dealing with this class of sewage, as you know, but it is the only successful method we have in getting it out of our possession. At this point I want to remark that I proposed to our C. O. that a couple of filtering tanks of a suitable size be built and from them to run the stuff on to a small piece of land, laid out as for intermittent downward filtration. I think now, as I thought then, that that would prove to be a workable system, if not the best, but the C. O.

refused on grounds that cannot be mentioned here without incurring the censor's blue pencil. I drew up a rough sketch of the idea, and if I can find it, will send it along.

Our latrine system is quite good. We have two tins placed together in the formation of a broad circumflex. One is for faeces and the other for urine. The seat crosses the tins at their apex. When easement is completed, the faeces are thrown into a small incinerator that is kept burning day and night, and the urine into a pail. With the exception of a faint odor from the incinerator, the process is quite ideal. The urine is taken away daily by a Belgian farmer, but how it is ultimately disposed of I do not know.

The bath house and lavatory are together in one hut. The floors are of concrete, on which rest a covering of trench floor, making a nice grating. Cold water is laid on, and a cold shower is obtainable in the bath house. Hot water is provided by some Sawyer stoves, and is always available. The baths are just ordinary galvanized iron tubs, but they answer their purpose. The waste from these places is carried away by means of a shallow, graded trench to the soakage pit.

Then there is the fumigator, as it is officially named. It is one of the Thresh portable disinfectors, and is remarkably simple in its operation. As you know as much about this type of machine as I do, I will not dilate upon it.

The incinerator is my chef d'oeuvre. I built it in about three hours, with the aid of two defaulters and our hands, using bricks, sand and clay, as the materials. It is about 5 feet 6 inches by 4 feet by 3 feet 6 inches. For grate bars we cut some corrugated iron into strips and put them on edge, about 4 inches to 5 inches apart. This did not act as well as I expected it to, so I cut off a piece of the same material, the same size as the inner surface of the incinerator, and made a long cut in the ribs. The lips thus formed were bent back, leaving an opening about 2 inches wide all down its length. This new fire grate was put on top of the old, and it works wonderfully well. We burn several hundred-weights of garbage during a 12-hour day, chiefly torn and blood-stained clothing. Old tins are all burnt

and so is paper, soiled dressings, floor sweepings, and such like stuff. Before burning old clothes, all buttons are removed and the pockets searched. Ammunition is easily overlooked in the pockets during the preliminary search in the ward. To digress a moment, I may say that it was only yesterday that I was turning over the fire when a cartridge exploded. It didn't bother me any, but still there was the possibility of a casualty occurring right there. A strict watch is necessary, or otherwise a bomb or some other item of compressed devilment may get by. The burnt refuse, ashes and tins I use to build up the embankment alongside the railroad. I am widening it by about 3 feet. I have had a line of stakes driven and am using corrugated iron as an outer wall. Between this and the old road face I am putting my rubble. Around the incinerator I have endeavored to overcome the mud problem by putting in a layer of stones. I think it will answer its purpose pretty well, but as it has not rained since yesterday morning I may be a little premature in my conceit. A very high military personage was around today, and was very pleased with what had been done here.

The kitchen is just a little better than the ordinary camp kitchen. It has a concrete floor, and a fly-proof room for eatables. They may get screens for the doors, ventilators, etc., but it is doubtful. I am going to advocate their installation, anyhow. The kitchen refuse is put into swill tubs, and taken away by farmers for hog feed. The ashes are used as a top surface on our paths.

We have now a system of drainage for all waste water, urine and faeces being dealt with as before mentioned. The only faults I have to find with it are (1) the patent joints, and (2) the position of the pipes in respect to the manholes. In the latter defect the pipes are laid at the top of the manholes, which in my opinion is a mistake. Four-inch iron pipes run from the kitchen on one line, and the latrine and ablution house on the other. These lines converge to a central manhole, having passed through two other manholes on each line en route. These manholes are built of brick and cement, with a

cement finish, and are divided by a piece of corrugated iron in such a fashion as to form a rough kind of grease trap, which is very effective.

The waste is carried further afield to a series of tanks. This part of our system is very good and is a miniature sewage disposal works. There are three tanks of corrugated iron, let into the earth, and fed in rotation by the raising or lowering of a sluice gate. The waste is treated with chloride of lime and after precipitation, is run into a clinker filter bed, of which there are two. This part of the scheme works out very well, but to my mind there is an excess of free chlorine in the waste that passes from the tanks to the filter. This is, as you know, absolutely destructive to the growth of any bacteria bed, and that is why the effluent shows a higher percentage of bacteria after leaving the filter than it does when leaving the tanks. The tanks are aerobic and are each capable of earing for one day's waste. The sludge is dumped into a small stream, distant from the nearest town, and is comparatively if not absolutely harmless, owing to the excess of chlorine. It is quite clear and sparkling.

Of our water supply, I may only mention that it is ample and fairly good. My duties include the providing of the drinking water for the whole of the bunch. This includes the testing and chlorination of all drinking water. I usually require about gr. II. balc. chl. to 100 gals., but on rare occasions, a higher percentage is necessary. One part per million is the average.

The old incinerator has been scrapped, and a new one built of brick and cement, according to the plans and specifications of yours truly. It is an absolutely roaring success I am pleased to say, but it hurts me to think of all that heat energy being wasted.

When a man "gets his" in the trenches or in an attack, the first people to handle him are usually his own comrades of the regimental bearer section, who form what is known as a Regimental Aid Post. There, he is dealt with according to his needs, and is evacuated to the Field Ambulance. There are times however when the Field Ambulance has to go "over the top" with

their stretchers, fix up the wounded and carry them back to the F. A. Headquarters, or to the Advanced Dressing Station. Almost invariably these deeds are carried out under fire of varying intensities. Casualties are passed back from the A. D. S. to the Main Dressing Station, where slightly more elaborate dressing rooms obtain, and where the casualty gets a chance of a little rest before being evacuated to a C. C. Station. If the casualty has not, up to this point, received an injection of Anti-tetanic serum, he gets it here, together with any absolutely imperative operation. (A man suffering from concussion or shell shock, does not receive any A. T. unless he is wounded also).

It oftentimes happens that the M. D. S's. are also under shell fire, but the work goes on just the same. I know of several cases that came under my own notice, where men who have received a "cushy" wound in the fire or support trenches, have received a permanent "blighty" in the M. D. Stn., or on the ambulance wagon taking them "out". The men who do this work are heroes. It takes a cool nerve and a steady brain to attend to a man with say, a compound fracture of the femur, or grave abdominal injuries, when every kind of shell is falling all around. To people who live in security, the sensation of a falling shell in their immediate vicinity is something altogether beyond their ken. The most able of war correspondents, even in their greatest moments, cannot impart it. It must be experienced to realize just what the F. A. personnel has to endure when on their job.

From the F. Amb. the casualty is taken usually by motor ambulance to the Casualty Clearing Station. This class of unit is usually between five and twenty-five miles behind the firing line. The place I will allude to in the following remarks is very near to a famous place, perhaps I should say name, as that is about all there is left to it. We can hear the guns, and without putting a big strain on our listening faculty. This C. C. S. is an orderly collection of huts and tents. The huts house the more serious cases, the tents the lighter ones. One ward (or hut) is set

aside for serious abdominal cases, while other tents are for medical casualties.

When the patient arrives at the C. C. S., he is carefully carried from the motor ambulance to the Reception room, and is laid on the floor. Those able to walk, go there on being directed thereto and sit on the forms around the room. The Medical Officer and his assistants examine the patient's Field Medical Card, and the fullest particulars concerning him are recorded on another card that is afterward filed in the orderly room. The M. O. notes all the particulars rapidly of each case, and marks the patient's coat or stretcher with a symbol that denotes under what heading or section the man is to go. Sometimes he is for immediate operation, perhaps a renewal of dressing, or he is to go to a ward and get rest and food. Occasionally we get one in for whom there is no aid but that of the Padre's. To digress a moment. I want to remark that the Padres of a C. C. S. have a very busy time and do their Master's work in a manner worthy of all praise. No hour of the day or night but what they are ready to do their bit and more, to ease the mind of, or comfort in other ways, those in need of their ministrations. Theirs also, is the last duty of the World to all who Pass Over. Another of their duties is intimately concerned with other folk's letters. This must be a painful duty, especially if all letters are the size of this one.

During the day an ambulance train pulls in and those casualties who are fit to be moved are taken and put on the train. These trains are travelling palaces. According to the build of the coach so do the bunks lie. In the French coaches, the bunks are in the position formerly occupied by the baggage racks. In corridor coaches, the bunks lie in the same lie as the train, in tiers of three, each side of the corridor. These trains take the casualties to the various Base Hospitals, where

a further sorting out takes place, some going to "Blighty," others remaining at the base.

There, in brief is the description asked for and I hope it will give you as much pleasure to read, as it has been mine to write it. The daily round, the trivial task, of our work here, would take up more time than I can spare just now, and probably

The Prize Essay Competition has evidently been well received by the members. The Secretary has already received several notifications from members of their intention to compete.

If you have not received your copy of the rules governing the contest, write the Secretary.

Competitors are asked to have their papers typed if at all possible. This will make it easier for the judges and will moreover conceal the identity of the writers.

We have to receive a few papers from members on Active Service.

The Manitoba Public Health Act is to be further amended at the present session of the Legislature. The Executive have again presented for consideration their suggestions regarding the status and qualifications of sanitary inspectors. It will not be an easy matter to get these adopted on account of the opposition of representatives from rural districts.

Mr. P. B. Tustin is enjoying a holiday in New York and other large cities. He expects to make a number of investigations which will be of service to him and from which the Association will no doubt benefit also.

HOURS OF WORK IN RELATION TO EFFICIENCY AND OUTPUT

By John W. S. McCullough, M.D., D.P.H.

THIS is the subject of an interesting article in the *Contemporary Review* and while the writer's viewpoint is the munitions worker and the employer in Great Britain, the question is of very considerable importance to the workers and employers in Canada, where munitions work has already reached extensive proportions.

In normal times in Great Britain the hours of boys under 18 and of women, are limited by the Factory and Workshops Act to a daily period of employment of twelve hours with breaks for rest and a short day on Saturday, bringing the total weekly hours of actual work down to sixty in non-textile factories and fifty-five hours in textile factories. But under the powers given the Secretary of State in war time, firms engaged in Government orders have been given permission in some cases to work overtime to an extent that would increase the weekly total to seventy hours a week (exclusive of mealtimes).

In addition it must be remembered that the twelve hours daily employment does not include the time spent in getting to and from the place of employment over long distances, during which time the worker is compelled to stand in an uncomfortable position in ill-ventilated and crowded cars, the effect of which is perhaps as bad or worse than his work. This question had been investigated by The Official Committee on the Health of Munitions Workers. Referring to the employment of women, the memorandum says: "It is far from uncommon now to find some two or three hours spent on the journey each way, generally under the fatiguing conditions of an over-crowded train or tram, often with long waits and a severe struggle before even standing room can be obtained." Even the normal factory hours (twelve hours a day) are thus often extended to necessitate fourteen or fifteen hours' absence from home.

The ill-effect of long hours and the consequent fatigue upon the physical health of the worker, are marked.

The most obvious effect of fatigue upon the body is that due to contraction of the muscles. The life of one's body comprises, first, the assimilation of outside materials, i.e., building itself up, and secondly, in breaking down this assimilated material into simpler chemical forms and getting rid of the waste products. These chemical wastes are rapidly formed during active work or exercise. When they accumulate in the blood they cause fatigue, a sort of blood-poisoning, so that a tired person is being actually poisoned by his own waste-products. If fatigue is followed by sufficient rest the body automatically cleanses itself. If the rest is insufficient the wastes are not completely removed and the body clogs itself with its own poisons, resulting in more or less serious injury to health. An example of this is seen in a hunted animal dropping dead not from heartstrain or over-exertion, but from sheer chemical poisoning. In addition to chemical poisoning, over-work causes the actual destruction of the energy producing substance found in human muscles, and finally over-exertion causes injury to the nervous system even more serious than that caused by muscular fatigue. The Committee on the Health of Munitions Workers found that the nervous system becomes exhausted before the muscles are tired out. In industrial work, consequently—both from the point of view of output and of health—observations of muscular symptoms of fatigue are not conclusive. The insidious effects of nervous overstrain unobserved by the worker, come first.

Improvement in Health from Shortened Hours.

It has been found that the shortening of hours has reduced the incidence of sickness. This fact is borne out by the experience of health insurance companies, sick clubs, etc. For example, the Brunner Mond and Company's works Sick Club showed a marked decline in illness after the introduction of three eight-hour shifts instead of the two twelve-hour spells pre-

viously in vogue in the company's works. In the Engis Chemical Works in Belgium the Director reports that the sick fund to which the men contributed in return for medical treatment and a money allowance during sickness, invariably showed a deficit under the longer hour system, but as soon as the shorter hour plan was well established the deficit was changed to a surplus.

The reports of the Committee already referred to, indicate most definitely that long hours without sufficient intervals for rest have a serious effect upon health, and where continued over long periods are likely to cause permanent injury.

This fact in itself is a strong argument in favor of the shorter day. But the question arises: In this time of stress and necessity, when munitions are urgently required, when the lives of our men at the front and indeed the safety of the Empire is at stake, is it not necessary to strain every nerve and muscle to keep up the output of shells? This might be so if overstrain of the workers would give the desired results. This brings one to the second point—the effect of hours of labor on output.

There is an instrument known as the "Ergograph," which records the effect of fatigue upon the power of muscles to contract. This instrument shows in a remarkable manner the effect of rest taken at the critical moment. Mosso, the Italian scientist, puts it most aptly when he says: "Our body is not constructed like a locomotive which consumes the same quantity of coal for every kilogram metre of work. When the body is fatigued even a small amount of work produces disastrous effects. The workman who persists in his task when he is already fatigued not only produces less effective work but receives greater injury to his system."

It is well-known from actual practice, that output has been maintained if not increased by a reduction of hours. The Zeiss Optical Works at Jena are run on a democratic scheme of co-partnership. The workers are of a well-paid and intelligent class. Some years ago a change from a nine-hour day to an eight-hour day was introduced by the virtual founder of the

firm and the inventor of the co-partnership basis, Professor Abbe. A ballot was taken of the adult workmen, a large majority of whom declared their willingness to do their best to produce as much in eight hours as they formerly did in nine. No changes were made in the working processes. At the end of a year the records of 250 typical workers in a number of different branches of work were scrutinized, and despite the lessened hours of work the output was increased 3.3 per cent. Some of the piece workers thought at first that they were going behind but without any conscious extra effort it was found that they had actually turned out more in the eight hours than in the former working day of nine hours. Professor Abbe's analysis of the causes of this automatic adaptation to the reduced hours, is of the greatest interest. He divides industrial fatigue into that caused by:

- (1) The amount of work done (i.e., the actual number of movements of the body in a given time.)

- (2) The speed at which the work is accomplished.

- (3) The fatigue caused merely by being present in the work-place, standing or sitting in a particular attitude amid the noise and turmoil of a factory. This last form of fatigue is automatically reduced with every reduction in hours. To this fact and that of the need for proper time to recuperate between working hours, Professor Abbe attributed in general the remarkable results of his experiment.

War conditions have produced fresh evidence of the ill-effects of excessive hours on output and the good effects in reduced hours in the same direction. The reports of the Chief Inspector of Factories and of the Health of Munitions Workers Committee, all go to prove that any lengthening of the hours beyond 6 p.m. and a total of eight and one-half hours of work exhausted the workers and was of no value in increasing the output. The experience of employers quoted in the report is to the same effect. The principal Woman Inspector says that where eight-hour shifts have been established, "the physical appearance of the workers compares very favorably with that of

those in other works, on the longer shifts and highly favorable reports have been made of increased output (in one case to the extent of a third) while need for supervision was decreased."

The Committee of the Health of Munitions Workers point out that long hours do not mean increased output, and say: "Taking the country as a whole the Committee are bound to record their impression that the munitions workers in general have been allowed to reach a state of reduced efficiency and lowered health which might have been avoided without reduction of output by attention to the

details of daily and weekly rests."

It is the writer's firm conviction that in shorter hours of work the interests of employer and employee are identical. The well paid and naturally well fed mechanic doing a reasonable day's time, will be healthier and consequently more efficient than the ill-paid, underfed, long-time worker. The former is bound to take more interest in his work, he will have less tendency to grouch about his condition. Mentally and physically he will be a better man, a better citizen and his work will consequently be of a higher type.



METROPOLITAN LIFE INSURANCE COMPANY MAKES APPOINTMENTS

Mr. James E. Kavanagh, superintendent of agencies of the Great Northern Territory, was appointed by the Board of Directors, on January 23rd, 1917, a Fourth Vice-President of the Company. He will have especial charge of group insurance and will assist Third Vice-President Ayres in the Ordinary Department.

Mr. Kavanagh is one of the best-known Superintendents of Agencies throughout the country, having visited districts in other territories as far as the Pacific Coast. He was appointed agent in Toronto in October, 1897. Prior to that he was an instructor in one of the local colleges. He was appointed an assistant superintendent after eight months' experience as an agent, located first at Brantford and then at Hamilton, Ont. At the Triennial Convention held at Ottawa in November, 1899, he was, to his very great surprise, appointed by the vice-president, during the convention banquet, to be superintendent at St. John, New Brunswick. He was there two years and a half, and made a fine record, and was promoted to the District of Toronto. His career during the two years and a half that he was there was such a notable one that when there was a vacancy in the staff of superintendents of agencies he was logically indicated for the place, and took charge of the Great Northern Territory, including all of Canada east of the Rockies and all of the State of New York except that contained in the Metropolitan Territory. Under his administration Canada has year by year

made a better man for man record than the record in the United States. The announcement of his appointment by the Board of Directors was made during the proceedings of the first convention day, and was received with the greatest enthusiasm by his fellow Superintendents of Agencies and the Superintendents of the country. He is the second Metropolitan Agent to have attained a vice-presidential office.

At a meeting of the Board of Directors Chauncey Rea Burr, M.D., of Portland, Me., was appointed an assistant medical director of the company.

Dr. Burr took the degree of Bachelor of Philosophy at Yale University in 1884 and was graduated from the Harvard Medical School in 1888. He completed his college education at Heidelberg and had hospital experience in Dublin, Ireland, and London. He became connected with several Boston hospitals and dispensaries and in 1898 became an assistant surgeon in the United States navy. Settling in Portland, Maine, in 1903, he attained a very prominent position in the medical fraternity of the State and was at one time president of the Portland Medical Club. He is the author of an important pamphlet which has been published by the United States Government on the Economic Value of Man.

He comes to the company well equipped for the duties of his office and is an important addition to the Home Office Medical Staff.





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